



west virginia department of environmental protection

Division of Air Quality
601 57th Street, SE
Charleston, WV 25304-2345
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Jim Justice, Governor
Austin Caperton, Cabinet Secretary
www.dep.wv.gov

June 8, 2017

Mr. Jon Putnam
WVO Responsible Care Leader
Union Carbide Corporation
P.O. Box 8361
South Charleston, WV 25303

Re: Union Carbide Corporation
South Charleston Plant
Permit No. R13-3308
Plant ID No. 039-00003

Dear Mr. Putnam:

Your application for a permit as required by Section 5 of 45CSR13 - "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permit, General Permit, and Procedures for Evaluation" has been approved. The enclosed Permit R13-3308 is hereby issued pursuant to Subsection 5.7 of 45CSR13. Please be aware of the notification requirements in the permit which pertain to commencement of construction, modification, or relocation activities; startup of operations; and suspension of operations.

The source is subject to 45CSR30. Changes authorized by this permit must also be incorporated into the facility's Title V operating permit. Commencement of the operations authorized by this permit shall be determined by the appropriate timing limitations associated with Title V permit revisions per 45CSR30.

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §§22-5-14.

Permit Cover Letter to Mr. Putnam
June 8, 2017
Page 2 of 2

Should you have any questions or comments, please contact me at (304) 926-0499, extension 1214.



Edward S. Andrews, P.E.
Engineer

Enclosures

- c. Jon Putnam, JPutnam@dow.com
James Fedczak, P.E. JPFedczak@dow.com
Jerome Cibrik, cibrikje@dow.com
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West Virginia Department of Environmental Protection
Jim Justice
Governor

Division of Air Quality

Austin Caperton
Cabinet Secretary

Permit to Construct



R13-3308

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§22-5-1 et seq.) and 45 C.S.R. 13 – Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the above-referenced facility is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:

**Union Carbide Corporation
South Charleston Site
039-00003**

A handwritten signature in blue ink, appearing to read "William F. Durham", is written over a horizontal line.

William F. Durham
Director

Issued: June 7, 2017

Facility Location: 437 MacCorkle Avenue South West
South Charleston, Kanawha County, West Virginia
Mailing Address: P.O. Box 8361
South Charleston, WV 25303
Facility Description: Chemical Manufacturing Facility
NAICS Codes: 325199
UTM Coordinates: 440.026 km Easting • 4,246.927 km Northing • Zone 17
Permit Type: Construction
Description of Change: This action is for the construction of a treatment process unit to process contaminated groundwater.

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §§22-5-14.

The source is subject to 45CSR30. Changes authorized by this permit must also be incorporated into the facility's Title V operating permit. Commencement of the operations authorized by this permit shall be determined by the appropriate timing limitations associated with Title V permit revisions per 45CSR30.

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1.0. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
MIGCS	MIGCS1	Ground Water Containment System	2017	100 gpm	MIGCS CO
MIGCS CO	MIGCS1	Anguil Model OA10 (Electric Catalytic Oxidizer) (CATOX)	2017	1,000 scfm	None

2.0. General Conditions

2.1. Definitions

- 2.1.1. All references to the “West Virginia Air Pollution Control Act” or the “Air Pollution Control Act” mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The “Clean Air Act” means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. “Secretary” means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary’s designated representative for the purposes of this permit.

2.2. Acronyms

CAAA	Clean Air Act Amendments	NO_x	Nitrogen Oxides
CBI	Confidential Business Information	NSPS	New Source Performance Standards
CEM	Continuous Emission Monitor	PM	Particulate Matter
CES	Certified Emission Statement	PM_{2.5}	Particulate Matter less than 2.5 µm in diameter
C.F.R. or CFR	Code of Federal Regulations	PM₁₀	Particulate Matter less than 10µm in diameter
CO	Carbon Monoxide	Ppb	Pounds per Batch
C.S.R. or CSR	Codes of State Rules	Pph	Pounds per Hour
DAQ	Division of Air Quality	Ppm	Parts per Million
DEP	Department of Environmental Protection	Ppmv or ppmv	Parts per Million by Volume
dscm	Dry Standard Cubic Meter	PSD	Prevention of Significant Deterioration
FOIA	Freedom of Information Act	Psi	Pounds per Square Inch
HAP	Hazardous Air Pollutant	SIC	Standard Industrial Classification
HON	Hazardous Organic NESHAP	SIP	State Implementation Plan
HP	Horsepower	SO₂	Sulfur Dioxide
lbs/hr	Pounds per Hour	TAP	Toxic Air Pollutant
LDAR	Leak Detection and Repair	TPY	Tons per Year
M	Thousand	TRS	Total Reduced Sulfur
MACT	Maximum Achievable Control Technology	TSP	Total Suspended Particulate
MDHI	Maximum Design Heat Input	USEPA	United States Environmental Protection Agency
MM	Million	UTM	Universal Transverse Mercator
MMBtu/hr or mmbtu/hr	Million British Thermal Units per Hour	VEE	Visual Emissions Evaluation
MMCF/hr or mmcf/hr	Million Cubic Feet per Hour	VOC	Volatile Organic Compounds
NA	Not Applicable	VOL	Volatile Organic Liquids
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		

2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Act W.Va. Code §§ 22-5-1. et seq. and the following Legislative Rules promulgated thereunder:

- 2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*
- 2.3.2. 45CSR14 – *Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration;*

2.4. Term and Renewal

- 2.4.1. This Permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any other applicable legislative rule;

2.5. Duty to Comply

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-3308, and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;
[45CSR§§13-5.11 and 10.3.]
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses, and/or approvals from other agencies; i.e., local, state, and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

2.6. Duty to Provide Information

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

2.7. Duty to Supplement and Correct Information

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

2.8. Administrative Update

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-4.]

2.9. Permit Modification

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-5.4.]

2.10 Major Permit Modification

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.

[45CSR§13-5.1]

2.11. Inspection and Entry

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

2.12. Emergency

- 2.12.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
- 2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are met.

2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. The permitted facility was at the time being properly operated;
- c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
- d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

2.12.5 The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

2.13. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

2.14. Suspension of Activities

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

2.15. Property Rights

This permit does not convey any property rights of any sort or any exclusive privilege.

2.16. Severability

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

2.17. Transferability

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. [45CSR§13-10.1.]

2.18. Notification Requirements

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

2.19. Credible Evidence

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management, and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40CFR§61.145(b) and 45CSR§34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1] *[State Enforceable Only]*
- 3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.
[45CSR§13-10.5.]
- 3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.
[45CSR§11-5.2.]

3.2. Monitoring Requirements *[Reserved]*

3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling

connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
 1. The permit or rule evaluated, with the citation number and language;
 2. The result of the test for each permit or rule condition; and,
 3. A statement of compliance or noncompliance with each permit or rule condition.

[WV Code § 22-5-4(a)(14-15) and 45CSR13]

3.4. Recordkeeping Requirements

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports, and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information

includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

- 3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.

[45CSR§4. *State Enforceable Only.*]

3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
- 3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

If to the DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street
Charleston, WV 25304-2345

If to the US EPA:

Associate Director
Office of Air Enforcement and Compliance Assistance
(3AP20)
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

DAQ Compliance and Enforcement¹:

DEPAirQualityReports@wv.gov

¹For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status Reports, Initial Notifications, etc.

3.5.4. Operating Fee

- 3.5.4.1. In accordance with 45CSR30 – Operating Permit Program, the permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

- 3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

4.0. Source-Specific Requirements

4.1. Limitations and Standards

- 4.1.1. The permittee shall comply with the following requirements for the Middle Island Groundwater Containment System (MIGCS):
- a. The average total volatile organic hazardous air pollutant (VOHAP) concentration of the contaminated groundwater entering the system shall not exceed 500 ppmw on a 12-month basis. The frequency of sampling and analysis used to determine compliance with this limitation shall be conducted in accordance with Condition 4.2.1.
[40 CFR 63.7886(b)(2) & 63.7943(b)(1)(ii)]
 - b. The total VOHAP material contained in the contaminated groundwater entering the MIGCS shall not exceed a 12-month rate of 65.82 tons with no individual hourly average flowrate of water greater than 100 gpm. Should the total average VOHAP concentration be less than 300 ppmw and the stated maximum volumetric flowrate is not exceeded, this condition is satisfied.
 - c. The oil/water separator, sump pump, cascade aerator, flocculation & flash mixing tanks, clarifier, siphon tank, and vertical flow vegetated contact beds of the MIGCS shall each be covered and equipped with a vent that routes all vapors and gases from these pieces of equipment to the CATOX through a closed-vent system. This closed-vent system shall be continuously operated and maintained whenever gases or vapor containing HAP are emitted from the identified sources in accordance with the following standards:
 - i. The closed-vent system shall be designed to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gauge or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating. Location of the instrument shall take into consideration of the combustion air intake for the CATOX to ensure that measurement is representative of the whole closed vent system.
[40 CFR §63.7882, §63.7890]
 - d. The horizontal contact beds of the MIGCS shall not receive any contaminated groundwater with a VOHAP concentration of 500 ppmw or greater. Compliance with this limit is satisfied by complying with Condition 4.1.1.a.
[40 CFR 63.7886(b)(2)]
 - e. The Cascade Aerator shall be optimized to minimize the amount of VOHAP being stripped out of the groundwater with a flow rate of no greater than 475 standard cubic feet per minute.
 - f. All transfer systems associated with the MIGCS separator shall satisfy the general requirements of Subpart GGGGG to Part 63 by complying with the VOHAP concentration of Condition 4.1.1.a.
[40 CFR §63.7882, §63.7886(b)(2)]
 - g. The container(s) used to hold the oil from oil/water separator shall satisfy the general requirements of Subpart GGGGG to Part 63 by complying with the VOHAP concentration of Condition 4.1.1.a.
[40 CFR §63.7882, §63.7886(b)(2)]
 - h. If the concentration of VOHAP in the outlet of the of the horizontal contact beds of the MIGCS is equal to or greater than 10 ppmw, then the permittee shall meet the requirements of 40 CFR

63.7936(b) and record the name, street address, and telephone number of the facility that the outflow was transferred to.
[40 CFR 63.7936(a)]

- i. If the concentration of VOHAP in the collected liquid (oil) from the oil/water separator is equal to or greater than 10 ppmw and is transferred to another facility, then the permittee shall meet the requirements of 40 CFR 63.7936(b) and record the name, street address, and telephone number of the facility that the VOHAP material was transferred to.
[40 CFR 63.7936(a)]
 - j. The permittee must develop and make available for inspection, upon request, a site-specific monitoring plan for the system used measure and record the temperature difference across the catalyst bed of the CATOX and any other monitoring system required by Subpart GGGGG to Part 63 that must address the following:
 - i. Installation of the continuous monitoring system at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device).
 - ii. Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction system.
 - iii. Performance evaluation procedures and acceptance criteria (e.g., calibrations).
 - iv. Ongoing operation and maintenance procedures according to the general requirements of 40 CFR §63.8(c)(1), (3), (4)(ii), (7), and (8).
 - v. Ongoing data quality assurance procedures according to the general requirements of §63.8(d).
 - vi. Ongoing recordkeeping and reporting procedures according to the general requirements of 40 CFR §63.10(c), (e)(1), and (e)(2)(i).
[40 CFR 63.7935(g) and (h)]
 - k. The permittee must be in compliance with the emissions limits, including the average daily temperature difference limits of Condition 4.1.2.i.ii., and the work practice standards in Subpart GGGGG of Part 63 at all times, except during periods of startup, shutdown, and malfunction.
[40 CFR 63.7935(a)]
 - l. The permittee must develop a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 40 CFR §63.6(e)(3).
[40 CFR 63.7935(c)]
- 4.1.2. The permittee shall operate and maintain the control device CATOX for the MIGCS unit in accordance with the following emission limitations and operating parameters.
- a. Emissions of VOC from MIGCS shall not exceed 0.65 pounds per hour. Annual VOC emissions from the CATOX shall not exceed 1.85 tons per year.
 - b. Total hazardous air pollutants (HAPs) from the CATOX shall not exceed 0.69 pounds per hour. Annual HAP emissions from the CATOX shall not exceed 1.92 tons per year.
 - c. Emissions of NO_x from MIGCS shall not exceed 0.01 pounds per hour. Annual NO_x emissions from the CATOX shall not exceed 0.04 tons per year.

- d. Emissions of CO from MIGCS shall not exceed 0.01 pounds per hour. Annual CO emissions from the CATOX shall not exceed 0.04 tons per year.
 - e. Particulate matter emissions from the CATOX shall not exceed 0.01 pounds per hour. Compliance with this limit is satisfied by complying with requirements of Condition 4.1.2.i.i. [45 CSR §6-4.1.]
 - f. The effluent routed to CATOX shall not contain hydrogen sulfide greater than 50 grains per 100 cubic feet of gas. Compliance with this limit shall be satisfied by demonstrating that the concentration of hydrogen sulfide in the contaminated groundwater entering the MIGCS is less than 20 ppm by weight of hydrogen sulfide. [45 CSR §10-5.1.]
 - g. Emission of Visible Particulate Matter. No person shall cause or allow emission of smoke into the atmosphere from any incinerator which is twenty percent (20%) opacity or greater. [45 CSR §6-4.3]
 - h. The provisions of item g of this condition (45 CSR §6-4.3.) shall not apply to smoke which is less than forty percent (40%) opacity, for a period or periods aggregating no more than eight (8) minutes per start-up, or six (6) minutes in any sixty (60)-minute period for stoking operations. [45 CSR §6-4.4.]
 - i. The permittee shall operate and maintain CATOX in a manner to achieve a minimum, 95% destruction efficiency for VOCs and volatile HAPs or an outlet concentration of TOC (minus methane and ethane) to 20 ppm by weight or less. Such proper operation of the control device shall constitute the following:
 - i. CATOX shall not exhibit any visible emissions for any duration greater than 5 minutes within a two (2) hour period.
 - ii. The permittee shall operate the CATOX (when VOCs/HAPs are present in the process vent gas) with the daily average temperature difference across the catalyst bed at or above the minimum temperature difference established during the most recent performance testing or design evaluation. [40 CFR 63.7925(g)(5)]
 - iii. The permittee shall replace the existing catalyst bed with a bed that meets replacement specifications before the age of the bed exceeds the maximum allowable age established in the design evaluation or during performance test. [40 CFR 63.7925(i)]
 - iv. The actual flowrate of effluent to CATOX shall not exceed 1,000 standard cubic feet per minute, which is the maximum flowrate rated by the manufacturer.
 - j. Periods of planned routine maintenance of the CATOX, during which the CATOX does not meet the daily average temperature difference across the catalyst bed of Condition 4.1.2.i.ii. shall not exceed 240 hours per year. [40 CFR §§63.7925(b)(1)]
- 4.1.3. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in

this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR§13-5.11.]

4.2. Monitoring Requirements

4.2.1. For the purposes of demonstrating compliance with Condition 4.1.1.a., the permittee shall determine the average total VOHAP concentration of a remediation material using direct measurement in accordance the following.

- The 1st average period after initial startup of the MIGCS, average total VOHAP concentration shall be conducted and determined in accordance Schedule No. 1 outlined in Table 4.2.1.
- Thereafter, the following schedule is determined based on previous average total VOHAP concentration as outlined in Table 4.2.1:

Table 4.2.1. Sample Schedule			
Schedule No.	Criteria of Schedule* (ppmw)	Minimum No. Samples Required for the 12-month average	Timing of sampling
1	Above 400	12	Monthly
2	At 400 and above 240	6	Bi-monthly
3	Less than 240	4	Quarterly

Criteria of Schedule is the average VOHAP concentration of the previous averaging period.

The permittee shall use the following procedures:

- a. Sampling. Samples of each material stream must be collected from the container, pipeline, or other device used to deliver each material stream prior to entering the remediation material management unit or treatment process in a manner such that volatilization of organics contained in the sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.
 - i. The monthly averaging period to be used for determining the average total VOHAP concentration for the material stream on a mass-weighted average basis must be designated and recorded.
 - ii. No less than four samples must be collected to represent the complete range of HAP compositions and HAP quantities that occur in each material stream during the entire averaging period due to normal variations in the material stream(s). Examples of such normal variations are variation of the HAP concentration within a contamination area.
 - iii. All samples must be collected and handled according to written procedures you prepare and document in a site sampling plan. This plan must describe the procedure by which representative samples of the material stream(s) are collected such that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is maintained. A copy of the written sampling plan must be maintained on site in the facility operating records. An example of an acceptable sampling plan includes a plan incorporating sample collection and handling procedures according to the guidance found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846 or Method 25D in 40 CFR part 60, Appendix A.

- b. Analysis. Each collected sample must be prepared and analyzed according to either one of the methods listed in 40 CFR §63.694(b)(2)(ii), or any current EPA Contracts Lab Program method (or future revisions) capable of identifying all the HAP in Table 1 of Subpart GGGGG of Part 63.
- c. Calculations. The average total VOHAP concentration (\bar{C}) on a mass-weighted basis must be calculated by using the results for all samples analyzed according to item b of this condition and Equation 4.2.1.c. as follows:

$$\bar{C} = \frac{1}{Q_T} \times \sum_{i=1}^n (Q_i \times C_i) \text{ (Equation 4.2.1.c.)}$$

Where:

\bar{C} = Average VOHAP concentration of the material on a mass-weighted basis, ppmw.

i = Individual sample "i" of the material.

n = Total number of samples of the material collected (at least 4 per stream) for the averaging period (not to exceed 1 year).

Q_i = Mass quantity of material stream represented by C_i , kilograms per hour (kg/hr).

Q_T = Total mass quantity of all material during the averaging period, kg/hr.

C_i = Measured VOHAP concentration of sample "i" as determined according to the requirements of paragraph (b)(2) of this section, ppmw.

Records of such sampling and analysis shall be maintained in accordance with Condition 3.4.1.
[40 CFR §63.7943(b)]

- 4.2.2. For the purpose of demonstrating compliance with the maximum average limit in Condition 4.1.1.b., the permittee shall install and maintain a volumetric flow measuring device that measures flowrate entering the MIGCS and shall record the instance that the hourly flow rate is greater than 100 gpm. The permittee shall maintain records of date, time, duration, cause, and corresponding corrective action taken or implemented as result of each exceedance in accordance with Condition 3.4.1.
- 4.2.3. The permittee shall install, maintain, and continuously operate a continuous parameter monitoring system (CPMS) that measures and records the temperatures at the inlet of the catalyst bed and outlet of the catalyst bed for the purpose of determining the daily average temperature difference across the catalyst bed of the CATOX. The CPMS shall complete a minimum of one cycle of operation for each successive 15-minute period. To calculate a valid hourly value, the permittee must have at least three of four equally spaced data values (or at least two, if that condition is included to allow for periodic calibration checks) for that hour from a CPMS that is not out of control according to the monitoring plan referenced in 40 CFR §63.7935. CPMS must determine the hourly average of all recorded readings and daily average except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments). These hourly temperature readings shall be used to determine the hourly and daily average temperature difference across the catalyst bed. Records of such every reading, calculations used to determine the hourly average, daily average temperature differences, inspection, calibration, and validation check shall be maintained in accordance with Condition 3.4.1.

The permittee shall conduct a performance evaluation on the CPMS according to the requirements in 40 CFR §63.8(e) and site-specific monitoring plan as required in Condition 4.1.1.j.
[40 CFR §63.7927(f), §63.7935(i) & (j), §63.7945, §63.7946, §63.7952(b), §63.7952(c)]

4.2.4. For the purpose of demonstrating proper operation of the CATOX as set forth in Condition 4.1.2.i.i., the permittee shall:

- a. Conduct Method 22 visible emission observations for a minimum of ten (10) minutes per observation in accordance with the following schedule with the initial observations after startup of the CATOX using Schedule 1.

Table 4.2.4.a. – Method 22 Observation Schedule		
Schedule No.	Frequency of Observations	Minimum No of days between Observations (days)
1	Monthly	20
2	Quarterly	60
3	Annually	270

- b. After three (3) consecutive observations with no visible emissions observed, the permittee may change the frequency of the observations to the next Schedule No. as listed in Table 4.2.4.a.
- c. In the event visible emissions are observed, the permittee shall take immediate corrective action to resolve the issue with the CATOX or ensure the device is operating in accordance with the manufacturer's written procedures. After observing visible emissions, the schedule of conducting observation shall reset back to Schedule No. 1. Records of such monitoring and repair activities shall be maintained in accordance with Condition 3.4.1.

4.2.5. For the purposes of demonstrating compliance with the requirements of the closed vent system in Condition 4.1.1.c.i., the permittee shall conduct the following activities:

- a. The permittee shall visually inspect the closed-vent system to check for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork or piping; loose connections; or broken or missing caps or other closure devices.
- b. The permittee must perform an initial inspection following installation of the closed-vent system. Thereafter, the permittee must perform the inspection at least once every calendar year.
- c. In the event that a defect is detected, the permittee shall repair the defect in accordance with the requirements of Conditions 4.2.5.d.
- d. The permittee shall make first efforts at repair of the defect no later than 5 calendar days after detection and repair shall be completed as soon as possible but no later than 45 calendar days after detection.
- e. Repair of a defect may be delayed beyond 45 calendar days if either of the conditions specified in the following sub-item (e.i. or e.ii.) occurs. In this case, the permittee must repair the defect the next time the process or unit that vents to the closed-vent system is shutdown. Repair of the defect must be completed before the process or unit resumes operation.
 - i. Completion of the repair is technically infeasible without the shutdown of the process or unit that vents to the closed-vent system.

- ii. The permittee determines that the air emissions resulting from the repair of the defect within the specified period would be greater than the fugitive emissions likely to result by delaying the repair until the next time the process or unit that vents to the closed-vent system is shutdown.
- f. The permittee shall maintain a record of the inspection and repairs in accordance with Condition 3.4.1.
[40 CFR §63.7928(b)(2), 40 CFR §§63.695(c)(2) & (c)(3), §63.696]
- 4.2.6. For the purposes of demonstrating compliance with Condition 4.1.1.h., the permittee shall sample and analyze to determine the average total VOHAP concentration of the outlet stream from the MIGCS in accordance with 40 CFR 63.7943. Such sampling and analysis shall be conducted in accordance with the appropriate procedures outlined in Condition 4.2.1. Records of such sampling and analysis shall be maintained in accordance with Condition 3.4.1.
[40 CFR §63.7936(a), §63.7940(c)]
- 4.2.7. For the purposes of demonstrating compliance with Condition 4.1.2.f., the permittee shall sample and analyze the inlet of the MIGCS within 12 months after startup of the MIGCS to determine the concentration of hydrogen sulfide. Should concentration of hydrogen sulfide be detected above 1.0 ppm, the permittee shall repeat such demonstration on an annual basis thereafter. Such sampling and analysis shall be conducted in accordance with the appropriate procedures outlined in Condition 4.2.1. Records of such sampling and analysis shall be maintained in accordance with Condition 3.4.1.

4.3. Testing Requirements

- 4.3.1. For the purposes of demonstrating compliance with the VOC and total HAP emission limits of Condition 4.1.2., the permittee shall demonstrate compliance with the destruction efficiency requirement of the CATOX in Condition 4.1.2.i. and to establish the daily average temperature difference across the catalyst bed in Condition 4.1.2.i.ii., the permittee shall conduct an initial performance test within 180 days after initial startup of the MIGCS. The permittee shall conduct a Method 18 of Appendix A to Part 60, which shall include all other reference methods needed to complete testing to determine if the CATOX is operating within compliance of Condition 4.1.2. During such testing, the MIGCS and CATOX must be operating in accordance with 40 CFR §63.7(e)(1) and 40 CFR §§63.7941(b)(1) through (b)(5). All operating parameters of the MIGCS and CATOX for each test run shall be recorded and included in the test report. Such demonstration shall be conducted in accordance with the applicable portions of Condition 3.3.1. Records of such demonstration shall be maintained in accordance with Condition 3.4.1.
[40 CFR §63.7(a)(2) & (e)(1), 40 CFR 63.7940(c), 63.7941]
- 4.3.2. The permittee shall repeat the testing in Condition 4.3.1. within 90 days after determining the total average VOHAP concentration of is at or above a total VOHAP concentration of 400 ppmw or at any other time when the action is authorized by Section 114 of the Clean Air Act.
[40 CFR §63.7942, and 40 CFR §63.7(3)]

4.4. Recordkeeping Requirements

- 4.4.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:
 - a. The date, place as defined in this permit, and time of sampling or measurements;
 - b. The date(s) analyses were performed;

- c. The company or entity that performed the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of the analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.
- 4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
- 4.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:
- a. The equipment involved.
 - b. Steps taken to minimize emissions during the event.
 - c. The duration of the event.
 - d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
 - f. Steps taken to correct the malfunction.
 - g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
- 4.4.4. The permittee shall keep records specified in 40 CFR 63.7952(a)(1) through (4), which following:
- a. All documentation supporting Initial Notification or Notification of Compliance Status for the MIGCS with the requirements of Subpart GGGGG;
 - b. Records in 40 CFR 63.6(e)(3)(iii) through (v) related to startups, shutdowns, and malfunctions;
 - c. Results of performance tests as required to be conducted either under Condition 4.3.1., or 4.3.2., and
 - d. Records of initial and ongoing determinations for affected sources that are exempt from control requirements under Subpart GGGGG.
- [40 CFR §63.7952(a)]**
- 4.4.5. The permittee shall record, on a semiannual basis, the information specified in the following paragraphs for planned routine maintenance operations that would prevent the CATOX from not being capable of meeting the requirements of Condition 4.1.2.i.

- a. A description of the planned routine maintenance that is anticipated to be performed for the CATOX during the next 6 months. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.
- b. A description of the planned routine maintenance that was performed for the CATOX during the previous 6 months. This description shall include the type of maintenance performed and the total number of hours during these 6 months that the CATOX did not meet the requirement of Condition 4.1.2.i., due to planned routine maintenance.
- c. The permittee shall maintain such information in accordance with Condition 3.4.1.
[40 CFR §63.7952(d), 40 CFR 63.696(g)]

4.5. Reporting Requirements

- 4.5.1. Any exceedance(s) of the allowable visible emission requirement for the CATOX discovered during observations using 40CFR Part 60, Appendix A, Method 9 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
- 4.5.2. Before the close of business on the 60th calendar day following the completion of the initial testing as required in Condition 4.3.1., the permittee shall submit a Notification of Compliance Status (NOCS) of Subpart GGGGG to Part 63 according to 40 CFR 63.9(h)(2)(ii).
[40 CFR §63.7950(e)(1) and 40 CFR §63.9(h)(2)(ii) & §63.10(d)(2)]
- 4.5.3. The permittee shall submit semiannual compliance report of Subpart GGGGG to the Director. The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in 40 CFR §63.7883 and ending on June 30 or December 31, whichever date comes first after the compliance date that is specified for your affected source.
[40 CFR 63.7951(a)]

The first compliance report must be postmarked or delivered no later than the date established in the facility's Title V operating permit, whichever date comes first after the first compliance report is due. Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each subsequent compliance report must be postmarked or delivered in accordance with the timing established in the facility's Title V Operating Permit.
[40 CFR §63.7951(a)(5)]

Each compliance report must include the information specified in 40 CFR §§63.7951(b)(1) through (3) and, as applicable, 40 CFR §63.7951 (b)(4) through (9).
[40 CFR §63.7951(b)]

CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached _____, representing the period beginning _____ and ending _____, and any supporting documents appended hereto, is true, accurate, and complete.

Signature¹

(please use blue ink)

Responsible Official or Authorized Representative _____

Date _____

Name & Title

(please print or type)

Name _____

Title _____

Telephone No. _____

Fax No. _____

¹ This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
 - (i) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
 - (ii) the delegation of authority to such representative is approved in advance by the Director;
- b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of U.S. EPA); or
- d. The designated representative delegated with such authority and approved in advance by the Director.